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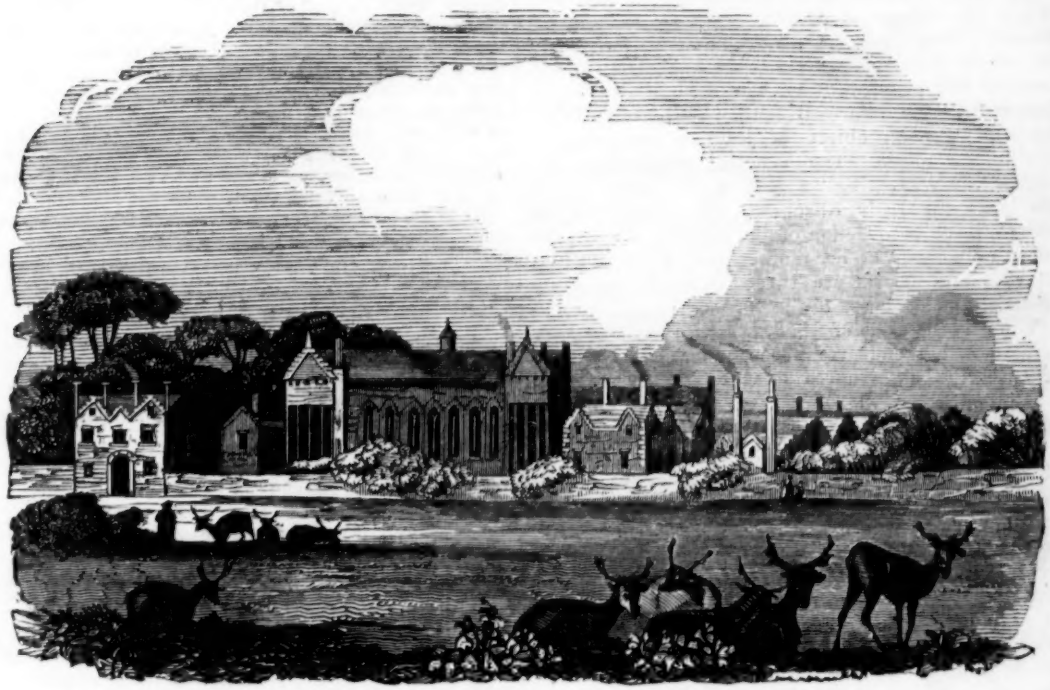
QUEEN ELIZABETH; HER PROGRESSES AND PUBLIC PROCESSIONS. No. IV.



ASHRIDGE ABBEY, IN THE TIME OF QUEEN ELIZABETH.

CONDITION OF THE PRINCESS ELIZABETH IN THE REIGN OF MARY—HER ARREST AT ASHRIDGE, AND REMOVAL TO LONDON.

The death of King Edward the Sixth, which occurred on the 6th of July, 1553, was concealed for two days by the Protector, John Dudley, Duke of Northumberland, who was desirous of taking measures to secure the succession of his daughter-in-law, Lady Jane Grey, in conformity with the will which Edward had been induced to make, upon his deathbed, setting aside his sisters Mary and Elizabeth. It was important for the protector's object, that he should have the persons of the two sisters in his hands; and with this view he wrote letters in the king's name requiring their immediate attendance. Mary had nearly fallen into the snare; she was journeying to town when a secret messenger met her with a private communication of Edward's death and the machinations of Northumberland. She immediately turned her horse towards the eastern counties, and never rested till she had reached her castellated mansion of Kenninghall, in Norfolk, which lay at too great a distance from the metropolis to be suddenly surprised. Elizabeth remained tranquil at her residence in Hertfordshire, where she was waited on by Northumberland, who apprized her of Edward's death and the accession of the Lady Jane, and proposed to her that she should resign her own title to the crown in consideration of a sum of money and certain lands which should be assigned to her. With characteristic prudence Elizabeth replied, "that her elder sister, the Lady Mary, was first to be agreed withal; for as long as the said Lady Mary lived, she for her part could challenge no right at all."

The brief reign of Lady Jane Grey ended on the 20th of July; and towards the close of that month, as Queen Mary advanced at the head of her army towards London, the Princess Elizabeth went into Essex to meet her, with a large cavalcade of knights and ladies; Stow says that she was "accompanied by one thousand horse, of knights, ladies, gentlemen, and their servants." Four days afterwards she rode with the Queen to the Tower, through the richly decked streets of the city, amid the discharges of ordnance and the acclamations of the people; seven hundred and forty velvet-coated nobles and gentlemen preceded them, and one hundred and eighty ladies followed them. As an illustration, indeed, of the intimacy which at this period subsisted between the two sisters, it is related by Fox the martyrologist, that "Queen Mary when she was first queen, before she was crowned, would go no whither but would have her [the Princess Elizabeth] by the hand, and send for her to dinner and supper." According to Holinshed, when Queen Mary rode through the city towards Westminster, upon the occasion of her coronation in October 1553, the chariot in which she sat was followed by another "having a covering of cloth of silver all white, and six horses trapped with the like, wherein sat the Lady Elizabeth and the Lady Anne of Cleve." According to the Spanish ambassador then in England, Elizabeth carried the crown

which was used on that occasion; and that functionary reported to his court, that the princess whispered to Noailles, the French ambassador, that it was very heavy, and that she was tired with carrying it; and that the Frechman was heard to answer that she must be patient, and when soon placed on her own head it would seem lighter. "As the Spaniards," says Mr. Sharon Turner, "were at some distance, and could not have heard a private whisper very perfectly, we may assume that the actual speech was, 'if it were on your own head it would not seem so.'"

But the situation of Elizabeth was soon altered. When the design of Queen Mary to restore the Roman Catholic religion became apparent, the eyes of the whole Protestant party were anxiously turned towards the princess, who was well known to be attached to the reformed faith. This circumstance rendered her an object of jealousy and even of fear to the queen. The Venetian ambassador describes Mary as being "a prey to the hatred which she bears my Lady Elizabeth, and which has its source in the recollection of the wrongs she experienced on account of her mother, and in the fact that all eyes and hearts are turned towards my Lady Elizabeth as successor to the throne."

Towards the close of 1553, Queen Mary was very earnest in her endeavours to induce her sister to practise the observances of the Roman Catholic religion. Elizabeth refused to comply; and her enemies then suggested that she should be imprisoned. "I do not doubt," wrote the French ambassador to his court, "that her obstinacy will conduct her to the Tower soon after parliament meets, if things be resolved on as I think they will be." But Mary preferred endeavouring to compel her sister to conform. Elizabeth persisted in her refusal; and her conscientious preference of her own faith was imputed to seditious exhortations. The French ambassador, after relating that the princess would not hear mass nor accompany her sister to the chapel, in spite of all the remonstrances of the queen and her lords, adds, "It is feared that she is counselled and fortified in this opinion by some of the great, and that by these means some new troubles may be preparing." Again shortly afterwards he thus writes:—"The obstacle of Madame Elizabeth is not a little to be feared as up to this time she has been not at all willing to go to the mass. Last Saturday and Sunday the queen caused her to be preached to and entreated by all the great men of her council, who only drew from her at last a very rough answer." Again was her refusal imputed to disloyal machinations; and it was expected that the queen would change her household and even confine her in prison.

In the beginning of the month of December, Elizabeth obtained permission to leave the court and retire to her house at Ashridge, in Buckinghamshire. Suspicion, however, still attached to her, and she was living every hour surrounded with peril.

As the intentions of Mary (says Mr. Sharon Turner,) to bring back popery became visible, the greatest discontents began to arise, with an idea in some naturally arising from Henry's statutes against his daughter, that the young queen of Scots was the rightful heiress of the crown. But the danger to Elizabeth arose from the larger portion of the dissatisfied forming conspiracies to dispossess her sister, and to place her as a Protestant princess on the throne.

Early in the year 1554 the rash and unfortunate insurrection of Sir Thomas Wyatt broke out. Although Elizabeth had no concern in this conspiracy, it involved her in much trouble, and caused her much personal suffering. On the 5th of February, immediately after the insurrection had been suppressed, certain members of the council were sent to Ashridge with a party of horse, with orders to bring the princess to London, "either quicke or dead." The messengers "at their sodaine and unprovided commyng," to use the expressions of John Fox, the martyrologist, found her "sore sicke in her bed, and very feeble and weak of body."

Whither when they came (continues the same historian,) ascending up to her grace's privie chamber, they wylled one of her ladyes whom they met, to declare unto her grace, that there were certaine come from the court which had a message from the queene. Her grace havyng knowledge thereof, was right glad of their commyng; howbeit, being then very sicke, and the night farre spent, (which was at ten of the clocke,) she requested them by the messenger, that they woulde resort thyther in the mornyng. To this they answered, and by the said messenger sent worde againe, that they must needes see her, and would so doo, in what case soever she were. Whereat the lady being agast, went to shewe her grace their wordes; but they hastily folowing her, came rushyng as soone as she unto her grace's chamber unbydden.

At whose sodaine commyng into her bed-chamber, her grace being not a little amased, said unto them, Is the hast such that it might not have pleased you to come to-morrow in the mornyng?

They made answere, that they were right sory to see her in that case. And I (quoth shee,) am not glad to see you here at this tyme of the night. Whereunto they answered, that they came from the queene to doo their message and duetie, which was to this effect, that the queene's pleasure was, that shee should be at London the seventh day of that present moneth. Whereunto shee saide,—Certes, no creature more glad then I to come to her majestie, beyng right sorye that I am not in case at this tyme to wayte on her, as you yourselves doo see and can wel testifie.

Indeede we see it true (quoth they), that you doo say to which we are very sorye. Albeit, we let you to understande, that our commission is such, and so strayneth us, that we must needes bryng you with us either quicke or dead. Whereat, shee beyng amased, sorowfully said, that their commission was very sore; but yet, notwithstanding shee hoped it to be otherwise and not so strayt.—Yes, verily, sayd they. * * * *

In conclusion, they wylled her to prepare agaynst the mornyng at nyne of the clocke to goe with them, declaring that they had brought with them the queene's lytter for her. After much talke, the messengers declaring there was no prolongyng of tymes and dayes, so departed to their chamber, being enterteyned and cheered as apperteyned to their worships.

On the following morning, at the hour prescribed, Elizabeth was led forth for her journey, very faint and feeble, and "in suche case that shee was redy to swound three or foure tymes" between them. "What should I speake here," exclaims John Fox, "that cannot well be expressed; what a heavy house there was to beholde the unreverend and doulefull dealyng of these men, but especially the carefull feare and captivitie of their innocent lady and maistresse."

Although Elizabeth was able to travel "with lyfe," yet her illness was so severe, that it was not until the fourth night of her journey that she reached Highgate. Here being very sick, she tarried that night and the next day; "during which time of her abode," says Fox, "there came many pursuivants and messengers from the court, but for what purpose I cannot tell." When the princess entered London, great multitudes of people came flocking about her litter which she ordered to be opened for the purpose of showing herself. The remainder of her coming into London on this occasion is thus described in an old manuscript chronicle.

The same tyme and daye, between four and fyve of the clocke at night, my lady Elizabeth's grace came to London through Smithfielde untoo Westminster, with C velvett cotts after her grace. And her grace rod in a charytt, opyn on both sydes, and her grace [had] ryding after her a

100 in cotts of fyne redde gardyd with velvett; and so through Flet-strete unto the court through the queene's garden, her grace being sycke.

Our engraving contains a view of the old abbey at Ashridge, at which Elizabeth was arrested in the manner which we have just described. This place, the name of which was formerly written *Esserugge*, *Aescrugge*, *Asserugge*, and *Ascherugge*, is in the parish of Pitstone, in the county of Hertford. It is supposed by some to have been a royal residence before the foundation of the college, as it is well known to have been after the dissolution thereof. The name is derived from "a hill set with ash-trees;" the oldest denomination of the place being *Aescrugge*, from *aese*, as the ash-tree was first called, and *rugge*, a hill or steep place, afterwards written ridge.

The college was completed in 1285, being founded by Edmund, Earl of Cornwall, whose father Richard*, a person of high repute for his heroic endowments, had been elected king of the Romans, by the unanimous consent of the princes of the empire. It was established for a rector and twenty brethren or canons, called *Bonhommes*, a religious order which had not been previously introduced into England. They were brought out of the south of France at a time when there existed in that country a sect who called themselves *Boni Homines*, (literally *good men*), and were termed in the vulgar Gascon dialect *Los Bos Homes*.

The college at Ashridge was founded expressly in honour of the "precious blood of the holy Jesus;" and the occasion of so remarkable a dedication is thus related by Holinshed:—

Edmund, the son and heir of Richard, Earl of Cornwall, who was second son to King John, being with his father in Germany, and there beholding the reliques and other precious monuments of the ancient emperors, he espied a box of gold, by the inscription whereof he perceived (as the opinion of men then gave) that therein was contained a portion of the blood of our blessed Saviour. He therefore being desirous to have some part thereof, by fair intreaty and money obtained his desire; and brought the box over with him into England; bestowing a third part thereof after his father's decease in the abbey of Hailes, which his father had founded, and wherein his father and mother were both buried, whereby to enrich the said monastery; reserving the other two parts in his own custody; till at length, moved upon such devotion as was then used, he founded an abbey at *Asserugge*, in Hertfordshire, a little from the manor of Bercamsted, in which he placed the monks of the order of *Bonhommes* (good men), being the first that had ever been of that order in England; and assigned to them and their abbey the other two parts of the sacred blood.

In the times of ignorance the imposition was successful, and brought multitudes to Hailes and Ashridge; but when the Reformation came it was discovered and exposed. Bishop Burnet relates the manner in which the exposure took place at Hailes, telling us that the blood there was found to be that of a duck. Of that at Ashridge, Speed says,—

Ashridge was in great repute for the blood (supposed out of Christ's sides) brought out of Germany by Edmund, eldest son of Richard, King of the Romans and Earl of Cornwall: whereto resorted a great concourse of people for devotion and adoration thereof. But when the sunshine of the Gospel had pierced through such clouds of darkness, it was perceived apparently to be only honey clarified and coloured with saffron, as was openly shown at St. Paul's Cross by the Bishop of Rochester, 24th Feb. 1538.

Very soon after the foundation of the college of Ashridge, it rose to be a place of some importance; for in the year 1291, King Edward the First held a parliament in it. It remained in the hands of the Bonhommes till the 26th of Henry the Eighth, when it was visited by the royal commissioners, and the rector and brethren made their recognition of his supremacy. The rental of their estates then amounted to 447*l.* 18*s.* In the following year the first act for the Dissolution of the Monasteries was passed.

After the dissolution Ashridge became a royal residence. We know not to what tenant it was assigned during the remainder of Henry's life; but by a deed dated 24th April, in the year 1551, the house and demesnes of Ashridge were granted to Elizabeth by her brother Edward the Sixth, who is said indeed to have been nursed here. The deed in question is one of the very curious papers in the archives of the Bridgewater family, the present possessors of Ashridge; and in the same collection is another, by which it appears that, on the 28th day of March, 1556, "the right excellent Princesse, the Ladie Elizabeth's grace," leased several parcels of the lands and demesnes, and likewise the mansion and other buildings at Ashridge, for the term of twenty-one years, to one Richard Combe, of Hemelhempsted, gent., at a yearly rent of "six poundes and tenpence of lawful money of Inglande."

When she had been some time upon the throne, Elizabeth granted Ashridge for life to one of her gentlemen pensioners; and three years afterwards she granted it to John Dudley and John Ayscough, and their heirs. After passing through several hands, the property came eventually, in the reign of James the First, into the possession of Sir Thomas Egerton, Lord Ellesmere, celebrated for having been Lord Keeper to Queen Elizabeth, and Lord Chancellor to her successor King James the First. In his direct descendants, the Bridgewater family, it has remained since vested; and by one of them the old abbey was replaced some years ago, by the present structure, which is among the most magnificent modern residences in England.

Of the few letters written by the Princess Elizabeth which have been preserved, the following written to her sister Mary from Ashridge in the reign of Edward the Sixth, is interesting both as a specimen of the epistolary correspondence of the age, and as an illustration of the relation which subsisted between the sisters before the accession of Mary.

The Princess Elizabeth to the Princess Mary.

Good sistar, as to hire of your siknes is unpleasant to me, so is it nothinge feareful, for that I understand it is your olde gest that is wont oft to visit you, whose comminge thogth it be oft yet is it never welcome, but notwithstanding it is comfortable for that "jacula prævisa minus feriunt." And as I do understande your nede of Jane Russel's service, so am I sory that it is by my man's occasion letted, wiche if I had knowen afore I wold have caused his wil give place to nede of her service, for as it is her duty to obey his commandement, so is it his part to attende your pleasure; and as I confesse it were miter [meeter] for him to go to her sins she attendes uppon you, so indide he required the same but for that divers of his felowes had busines abrode that made his tarijnge at home. Good sistar, thogth I have good cause to thanke you for your oft sendinge to me, yet I have more occasion to rendre you my harty thankes for your gentil writinge, which how painful it is to you I may wel gesse by my selfe, and you may wel se by my writinge so oft how pleasant it is to me. And thus I ende to troble you, desiring God to sende you as wel to do as you can thinke and wische or I desire or pray. From Hasherige, scribled this 27th of October.

Your lovinge Sistar,
ELIZABETH.

To my well-beloved Sistar Marye.

* It was this Earl Richard to whom the Pope Innocent the Fourth offered the kingdom of Scily and Naples, but upon so many inadmissible conditions, that the earl's agent at Rome observed, "You might as well say to my lord and master, 'I sell or give you the moon; climb up, catch it and take it.'"

THE HOUSE I LIVE IN.

No. V.

MAN's body's like a house; his greater bones
Are the main timber; and the lesser ones
Are smaller joints; his ribs are laths daubed o'er,
Plastered with flesh and blood; his mouth's the door,
His throat's the narrow entry, and his heart
Is the great chamber full of curious art.
His midriff is a large partition wall
'Twixt the great chamber and the spacious hall;
His stomach is the kitchen, where the meat
Is often put half sod for want of heat.
His spleen's a vessel Nature doth allot,
To take the scum that rises from the pot;
His lungs are like the bellows that respire,
In every office, quickening every fire;
His nose the chimney is, whereby are vented
Such fumes as with the bellows are augmented;
His bowels are the sink, whose parts to drain
All noisome filth, and keep the kitchen clean;
His eyes are crystal windows clear and bright,
Let in the object, and let out the sight;
And as the timber is, or great, or small,
Or strong or weak, 'tis apt to stand or fall.—QUARLES.

THE House I live in differs in some respects, as we have already seen, from many buildings. An ordinary building of wood, brick, or stone, is intended to stand firmly, no part, excepting the doors and windows, being made for motion. The ends of each part are usually fitted together by square-edged joints, with great exactness, and the frame is kept together by girths, braces, &c.

There are indeed a few parts of the House I occupy, which are not intended to have much motion; but in general the reverse is the case. Even the girths and braces are designed to regulate and direct its movements, but not entirely to prevent them. The joints, instead of being framed together by means of tenons and mortices, and kept as dry as possible, are rounded and made smooth, and moistened by a sort of oil, to suit them for motion, rather than to hinder it.

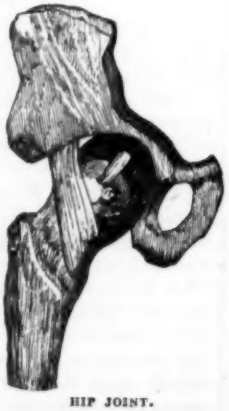
There are indeed a few joints—if joints they ought to be called—which are firm and unyielding; I mean the teeth. These, as we have already seen, are set into the jaw-bones, as firmly as are tenons into mortices, and even more so. They seem to stand there like nails or spikes, when driven into planks or timbers. The bones of the head, too, are joined firmly together in adults, as you have already been told.

Some of the joints of the human frame are real hinges. To this class belong the knee-joints, the joints of the toes and finger, and those of the elbow. The lower jaw may also be called a hinge-joint. The ankle-joints, the joints of the wrists, and indeed many others, sometimes move like hinges, but they perform other and very different motions besides.

HIP JOINT.

But the most curious joints in the human frame are what are called the ball-and-socket joints. The more important of these are the shoulder and the hip.

At *a* you see the deep hollow or socket in the bone, where the round head of the *femur*, or thigh bone, moves. This round head is drawn back from the bottom of the socket a little way, in order to show the round ligament near *a*. The latter is a very tough, strong cord, fixed by one end at the bottom of the socket, very firmly, and by the other fastened as strongly to the round head of the femur. If it were not for this ligament, the joint would be dislocated, or slipped out of its place, a thousand times more frequently than at present; for now indeed this but seldom happens. Around the socket at the hip is a tough, gristly rim, which greatly increases its depth. This socket is called the *acetabulum*; meaning vinegar-cup. It was supposed to resemble a kind of ancient vinegar-cup in use among the Romans.



HIP JOINT.

Annexed is a figure of another ball-and-socket joint, and also of a hinge-joint—the shoulder being an illustration of the ball working in a socket, and the elbow acting upon the principle of a hinge. Every one understands the nature of a hinge, which is in such constant use, and therefore the motion of the elbow-joint will be very readily understood.

Let us examine the joint of the elbow. The lower portion of the arm is formed of two bones, one large, called the *ulna*, and the other smaller, called the *radius*. The upper end of the small bone *d*, is a little rounded, and it lies against a small hollow, or depression, in the other bone, the ulna, at *g*, to which it is tied by cords, called ligaments, particularly by one which goes round it like a band. The ends of these two bones, thus united, turn on the end of the upper one, which is rounded and tipped with cartilage, and thus fitted for the purpose, as we see at *f*. They are kept together in a living person, (as indeed all bones are,) by broad and short straps or cords, called ligaments, which adhere to each end of the bone a little way from the joint, and are very tight and strong, and yet not so tight as to hinder the proper degree of motion.

To enjoy the entire use of the arm, two distinct motions are requisite, which may be employed separately or together, at will. For this purpose, while one of the bones of the fore-arm only, the *ulna*, is attached to the *humerus*, or bone of the upper-arm, the smaller bone of the fore-arm, or *radius*, is enabled to move in a hollow, or depression of the ulna, by means of its rounded upper end. At the lower end of the arm, this arrangement is reversed; the radius, instead of furnishing the head, becomes in turn the receiver, and the prominence of the ulna plays within a depression on its surface. By means of this reversed arrangement, the greatest freedom of motion is admitted, and, by the greater pliability which is gained, fractures and dislocations rendered less likely to occur.

But a ball-and-socket joint is more curious still. The bone which is represented at *b*, is the *scapula*, or shoulder-blade. The hollow place at *c*, is the socket in which the round head or ball, *a*, of the upper bone of the arm, (the humerus,) plays freely, when the arm is moved. The socket is so shallow, and the ligaments so long, in order to enable us to make almost every kind of motion with our arms, that it is much more easily slipped out of joint, or dislocated, than are the hinge-joints. Even the hip, which is also a ball-and-socket joint, has a much deeper socket; and it is partly on this account, and by a different arragement of muscles, that we cannot

swing our legs round with as much freedom as we can our arms.

The number of hinge and other joints in the frame of the House I live in is very great. It must be nearly, if not quite, a hundred and fifty.

You see the wisdom of the great Creator fully displayed in this structure and connexion of the bones. What if the joint of the knee could move in every direction, like that of the shoulder? Do you not see that when we walked, the legs would have dangled about strangely, instead of moving backwards and forwards in one direction only? And is it not plain that we never could have stood firmly on the ground? In like manner, how very inconvenient it would have been, to have our finger-joints move one way as well as another! On the contrary, how confined and cramped would have been the motion of the arm, if the shoulder had been like the knee, and had only permitted the arm to swing backwards and forwards, without our being able to carry it outward from the body!

LIGAMENTS.

But how are the joints held in their places? When we take up a bone which has lain, perhaps for years, bleaching in the sun and rain, we see that the ends are smooth, and some of them hinge-like; but if we take up two such bones, and put them together, they will not stay in that condition a moment, unless they are fastened by strings or wires, or something of the kind. How, then, are they kept together in the living person? This is what I am now about to tell you.

They are held together by short and strong straps, called *ligaments*. Some of them, however, are longer, and begin at a considerable distance, say an inch or two, from the very end of one bone, and then, after passing over the joint, are fastened into the next. This strap, or ligament, does not adhere or stick to the joint, as it passes loosely over it, but is only fastened strongly, where it rises, and where it is inserted, as if it were there glued to the bone. The inside, where, in crossing, it lies against or rests gently on the joint, is very smooth; so that the joint, in moving, may not grate or wear out.

These ligaments are white and shining, but not always very thick. They are usually very strong. Some of them are as narrow as a piece of tape. Others, as at the sides of the knee, or at the shoulder, are very wide. Some cross each other, as in the knee-joint. The latter are shown in the engraving, *a*. There are others that go all round the joint, and completely shut it up: as if the ends of the two bones were put into the two open ends of a short cylinder, or rather of a short bag or purse, and the open ends were then gathered round, and fastened tightly to the two bones; in this way, the joint would be completely shut up, as in a sack. This sort of ligament is called a *capsular* ligament. It would be difficult, nay, even impossible, to enumerate all the ligaments in the body, they are in many instances so interwoven with each other, and frequently inseparably united. It will be sufficient here to mention that the junction of the head with the spine, the whole length of the spine itself, the hand and the foot, are literally crowded with ligaments of different shapes and attachments, as may be best adapted for imparting strength and flexibility; and that each of the larger joints has several ligaments in connexion with it, the knee-joint alone being considered by some anatomists as having fourteen distinct ligaments to its own use.

The bags, or sacs, called *capsular ligaments*, are principally intended to prevent the joint from being easily slipped out, or dislocated. They also serve for another purpose, scarcely less important—a purpose which shows the wisdom of the great Creator in the contrivance of the human frame, more than almost any other; if, indeed, any comparison can be made where all is excellent.

The Father of the universe is the preserver as well as the creator of this "wondrous frame." Was there not something done to keep these joints oiled, if I may so call it, they would not last long. Take the knee, for example; and think what a vast deal of friction or rubbing together of the end of the thigh-bone and of the two leg-bones there must be.

A traveller probably swings each leg, in walking, about 1200 times in a mile. If he should walk thirty miles a day all the year excepting Sundays, he would swing each knee 15,024,000 times. Were he to do this every year, from the time he was twenty years old till he was seventy, or for a period of half a century, the number of movements would be 751,200,000 times! Now this continued rubbing of the bones of the knee together, if they were allowed to get dry, would wear them so much in a single day, that we should hear a grating noise at every step, long before night, and, in a very few days, the bones would be completely worn out and unfit for use. I question if they would last even a whole day. Iron or steel would wear out in a very short time. What, then, can be the reason why the knees and all the other joints do not wear out?

I have said that many of the joints are completely shut up, as if they were in a sack. Now the great Contriver of the animal frame has so contrived it, that a substance, called *synovia*, which answers all the purpose of oil or tar, continually oozes out on the inside of the ligaments at the joints, and keeps the ligaments themselves, and the joints, soft and moist. The synovia, or liquor which thus oozes out to lubricate the joints, is of just the right quality and quantity when we are in perfect health. If we are unwell, there may be too little or too much, or it may be too thick or too thin. If we use food or drink that is too heating or irritating, the synovia will become less in quantity or of poorer quality.

In these, and in other evils, prevention is better than cure. Those who live on moderate food, and avoid strong drinks, and work steadily but moderately, rarely have any trouble of this sort.

It has been said, that the ligaments hold the joints together. They do so; but the tendons or straps, which go off from the ends of the muscles, and are fastened into the several bones around their joints, materially help to hold them together. There are other wonderful contrivances to keep the joints firm and yet moveable, into which we cannot at present go.

That the great Creator made the joints to be used, is proved from their curious structure, and from the substance prepared to moisten them; but that they were not made to be used too violently is also proved by the fact, that if thus used, they become diseased. Sometimes the liquor called the *synovia* dries away; in these cases the limb becomes stiff and incapable of motion; at others, the joints become painful and often enlarged. It is but seldom, however, that they become diseased from mere exercise, provided our habits are temperate and regular; though occasionally rheumatic, and other painful affections, will encroach upon the ease of our sensations and the symmetry of our forms.

THE DUTCH FISHERIES.

No. I.

THE HERRING FISHERY.

THE Dutch have three sorts of fisheries,—the Herring, the Cod, and the Whale. Formerly the Herring Fishery was the chief branch of their industry, their grand source of wealth; it was called, at the time we refer to, the golden mine of the republic. Though still their principal fishery, it has much declined since the beginning of the last century. On the establishment of the French domination in Holland it fell to nothing; revived at the restoration, but has not yet reached its ancient prosperity. The monument raised in the fifteenth century, at Berliet, in honour of William Beükelson, who first discovered the art of curing herrings, shows how much importance was attached at that early period to this branch of trade. The first cause of its decline lay in the wars of Holland, during the latter part of the eighteenth entury, when English vessels cruised continually in the North Sea, and captured the Dutch fishing vessels. Again, during what the Dutch called the French epoch, the period during which Holland shared all the fortunes of France, she had to submit to the consequences of such an alliance. France, though triumphant on the Continent, was, so to speak, besieged in all her ports, and Holland, a country essentially maritime, was in the same plight. Such fishing vessels as ventured out to sea were almost invariably made prizes of, especially near the mouth of the Maas, where English men-of-war were sure to be on the look out for them. Besides, the Dutch in general considered themselves as in a conquered country, an idea which encouraged all sorts of disorders. Smuggling was considered lawful, the fishery regulations were neglected, and what herring was caught, was cured so ill as to become spoilt when exported.

Vlaardingen, on the right bank of the Maas, and two leagues from where that river joins the sea, is the only town whose inhabitants now carry on the fishery with spirit; they employ in it about 100 vessels. A century and a half ago, Browershaven, in Zealand, sent out 200, but that port is now deserted. Maassluis, at the mouth of the Maas, once counted 200, and has now only 20; Amsterdam has 15; Enkhuizen, on the Zuyder-Zee, instead of 200 which it once had, has now but three or four. Excepting Amsterdam, these towns had no other trade, and now their deserted harbours seem as if waiting for some new commerce to infuse a second life into them. Vlaardingen alone has escaped the general ruin, and continues to thrive; its fishing fleets are sent out by persons owning one or more vessels individually, or by joint-stock companies, owning up to 20.

The greater number of vessels destined to the herring fishing, return from that for cod, towards the end of May, or early in June. Tarring, painting, engaging men, providing stores, and preparing sails and rigging, create a deal of bustle for a fortnight among the population of Vlaardingen, who amount to about 17,000.

On the 10th or the 11th of June the captains and officers present themselves at the town-house, and swear that they will observe themselves, and see to the observance by others, of the fishery regulations; this done each hoists his colours. On the 14th of June, called colours' day, the people go to church, and pray to God for a blessing on the expedition. On leaving church they parade about the harbour, where the vessels are curiously placed, each having its prow turned right in shore, and its bow-sprit passing over the quay. They are all in beautiful order, and having their flags displayed, make a handsome appearance. Among the flags, one larger than the rest is hoisted astern, bearing the vessel's name, in gilt or black letters, on the white streak, the national flag having three horizontal streaks or bands. Crowds of curious persons come in from the neighbourhood, and as an eight days' fair commences at the same time, Vlaardingen wears a most animated appearance.

It is usual at this time to go on board the vessels, and drink good health and a prosperous voyage to the captain, who regales his guests either in his little cabin or under an awning on deck. Generally, too, the owners and their friends visit the captain on board his ship, as well as his own friends and family.

In former times much importance was attached to the sailing of the fleet on the 15th of June; but now, should the wind prove adverse, the vessels leave the harbour and lie at anchor in the Maas for two or three days, after which they must put to sea, or forfeit the government bounty.

The fleet is attended by an extra ship, or tender, carrying additional hands to take the place of such as fall ill or meet with accidents; properly speaking, it is a moving hospital (*ambulance*). It cruises for a fortnight with the fleet, receiving the sick and disabled seamen, and replacing them with others; it then makes for Shetland Bay, in the islands of that name forming the northern extremity of Scotland, and the centre of the fishing operations; there it spends a fortnight in attending to the recovery of its invalids; that period expired, it rejoins the fleet and cruises for another fortnight, returning the cured seamen to their respective vessels, and taking back the men it had left to supply their place. Thus it alternates during the whole of the fishing season. The men often injure their hands with the nets, which excoriate their fingers and impregnate them with salt, although fenced with gloves of leather, doubled with thick worsted Iceland gloves.

The tender which thus convoys the fleet has a carpenter and a cooper on board; these repair damages, and are of the utmost use. It has also an officer attached to it, who is specially charged with maintaining a strict observance of the fishing regulations, and with the prevention of smuggling in the Shetland Islands; he acts, indeed, as a sort of commissioner from the government.

The fishing is carried on from the 24th of June to the 30th of October. Twelve of the fastest sailing vessels are selected to carry home the first-caught herrings with the utmost speed. These vessels, called *jagers*, (chasers,) are under orders of one of their own number as admiral's ship. Each chaser has, in addition to its ordinary crew, an officer, called *koopman*, who keeps an exact account of the herrings taken on board, and of the vessels that supplied them.

The fleet generally proceeds as far as Hookness, but it is not easy to say where the herrings are found in greatest plenty. The fishermen go northward or southward, according to their knowledge of the habits of the fish, or their experience, and often according to orders from the owners. Herring caught towards the north is preferable to that caught towards the south, the flavour being infinitely superior.

It is forbidden to fish within five miles of the Scotch coast, by common accord of the British and Dutch governments; the former as a check upon smuggling, the latter because the herring caught near the land has the spawning sickness (*kwitziekte*). Britain insists, also, that rigorous measures be taken to prevent fraud. The luckless seamen who may be caught passing gin or tobacco into the hands of

smugglers in Shetland Bay, are condemned by the Scotch judges to fines and imprisonment; the sentence is intimated to the captain of the person convicted, and executed on his return to Holland.

On the 24th of June the nets are shot into the sea, and to fish sooner is forbidden, in order that all may start fair. That day accordingly is not forgotten at Vlaardingen; the owners meet together and dine; happy in the prospect of the success each anticipates for himself, many a toast is drank to the prosperity of the expedition.

The fishing once commenced, the chasers above mentioned cruise about in all directions, and collect the first-caught herrings; these are again transferred to the vessel selected to sail first until its freight is full; then a second is freighted, and so on. As each receives its complement of herrings, or when the proper moment for sailing homewards has arrived, the admiral authorizes their departure by signing the koopman's invoice; this goes on until its own turn arrives, and then his ship sails the last.

The freight of the chaser first despatched is generally from 16 to 20 tons, that of the second 60, and so on, augmenting as the value of the herring falls, that of the admiral being above 300 tons. The chasers often come to port without a full freight, either from the fishing being bad, or from the time lost in the freighting of those sent first, leaving not enough of time to freight the remainder. When the season is far advanced, the admiral must send them off, else they might arrive all at once, and produce a glut of herring following on a scarcity. The chasers are called first, second, and so on, in the order of their leaving the fishing ground, not in that of their arrival at Vlaardingen; for it may happen that the fifth, for example, by meeting with contrary winds, or by being damaged in a gale, may come into port after the sixth. Once discharged, they may put to sea again as fishing vessels, whereas before they were not allowed to fish. All ought to have returned to port by the 4th of August, up to which date the fishing vessels are not allowed to come in and sell their herrings in competition with what the chasers have brought. Should any be forced to return in consequence of damages sustained at sea, the herring it has caught since the freighting of the last chaser, is not allowed to be sold until the 4th of August; if any arrives in port after the day fixed for their return, it is sent away to a foreign port. The captains are bound on oath to hand over all the herrings they take to the chasers, until the whole up to the last are freighted. The regulation which obliges chasers arriving past their time to go to a foreign port is a very wise one, for thus all the proprietors of vessels forming part of the chasers' union, participate in the loss; this late arrival, however, seldom happens.

Moreover, all are not despatched to the port from which they sailed. The first always makes for Vlaardingen, the second for Hamburgh, the third for Maasslüis, and so on; but Vlaardingen is the resort of several, and always of the admiral. It is a good speculation to send a chaser to Hamburgh, for if it arrive before the Embden fishermen, it is sure to sell its herrings well.

The produce of all the herrings sold by the chasers is thrown into a common fund, and distributed among the members of the union, according to the quantity of fish supplied by the fishing vessels belonging to each, and charged against the common fund.

The arrival of the first chaser at Vlaardingen is a real fête; it generally takes place about the end of June, or beginning of July. From the moment that the vessel is expected, two men are posted at the top of the town steeple, with their eyes turned the whole day towards the sea. On descrying the expected chaser in the offing, notice is sent to the owners, and to the families of the men who form its crew; a flag also is hoisted from the steeple as a signal.

No sooner is this flag perceived throughout the town and neighbourhood than a cry of joy resounds on every side; the inhabitants meet in the streets, everything gives note that the port is about to resume its activity, after being like a desert since the fleet sailed. The quay, and the street leading to it, are crowded; each wants to know what proportion his friends or relatives have contributed to the freight of herring, and this is soon known, as the koopman lands in a pinnace with the invoice in his hand, and gives it to one of the owners who reads it aloud. The vessel is straightway moored, and discharges its precious cargo, which is generally sold at 800 florins the ton. But before allowing the sale to commence, two carriages are despatched with the first-fruits to the king and his ministers. Each is attended by two personages, one of whom drives while the other waves a flag. Their mission is not without fatigue and danger, for they must gallop all the way, but the king in return gives them a gratuity.

For the last five years there has been an association of shipowners, connected with the herring trade. It enjoys the protection of the government, and all must join it or forfeit their claim to the bounty, amounting to 700 florins. This association buys all the herring brought in by the fishing vessels, at prices fixed by a commission, but in reselling them it is free. The price fixed for the first ten vessels is higher than for the next ten, and the fall continues down to a minimum of 17 florins for the barrel of full herrings; above that for the *maatjen*, or best quality, and less for inferior qualities, such as the spawn-sick herring, (*kuitziek*,) the weak, (*sleppen*,) the *ijlen*, the *vrakken*, &c. The *maatjen* are the fry of the preceding year, hence small sized but good, and in great request. The *sleppen* come from barrels which have somehow or other lost their salt, which makes the fish soft and insipid.

Since the close of the French epoch, laws have been made on the manner of salting the herrings, and these are strictly observed. The sailors must put so much salt into each barrel; this preserves the fish, and has produced a revival of the trade. The Baltic, the north of Germany, and the interior of Holland, consume the greater part, and part goes also to the East Indies.

The fresh-herring fishery is carried on at Scheveningen, a village on the North Sea coast, about three miles from the Hague, and also by the inhabitants of the shores of the Zuyder-Zee. The vessels sent out from Scheveningen to this fishery are called bommens; they are flat, and far from elegant; this form is given them as a security against accidents among the numerous shoals and sand-banks of that coast. These bommens are of small size, and never go very far out to sea. The boats employed in the Zuyder-Zee are shaped differently, and have various other names, such as *pinkens*, *sockkers*, *hengstens*, &c. The same sort of craft may be seen at Scheveningen, but only for the petty fishing on the coast.

The herring caught off Scheveningen and in the Zuyder-Zee is, in a great measure, affected with the spawning sickness. It is smoked for a single night and sold as sour herring (bokking); or, after being smoked for several days, it is sold as English sour herring, which is the better way. It is eaten also without being smoked.

As the vessels destined for the great fishery are

forbidden to land unsalted herring, in like manner are the Scheveningen and Zuyder-Zee fishers forbidden to salt theirs. The reason is very simple. Great as is the abundance of herrings caught near the coast, the quality is inferior, and but for such prohibitions, the cost and trouble of procuring the rarer herring found on the north of Scotland, might deter persons from going for it. That taken so easily on the Dutch coast might engross the market, and so people would have bad fish at home, and the foreign trade would be injured; for even when salted the herring caught near the coast corrupts and becomes unwholesome food.

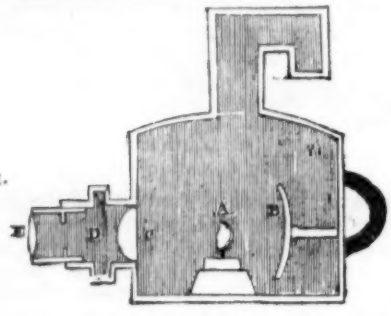
Notwithstanding this, the abundance found in the Zuyder-Zee has given rise to a sort of commerce which must injure the salt-herring trade, and affect the health of consumers. For some years past Frenchmen have gone into the Zuyder-Zee, and bought herrings from the coasting fishers; these they gut and salt on board their own vessels, and then take them to France, where they are sold as herrings caught out at sea. These speculators come from Diepoe, Dunkirk, and other less considerable ports.

THE MAGIC LANTERN AND PHANTASMAGORIA.

The Magic Lantern, so well known for its amusing effects, was invented by the celebrated German philosopher Kircher, who lived at the beginning of the seventeenth century. The principle on which it is constructed is much the same as that of the Camera Obscura *, but the arrangement is materially different.

Fig. 1 represents a section of the lantern, showing the internal arrangement of the lenses; A is a lamp

Fig. 1.



enclosed in the lantern, which is so formed as to allow no light to escape except through the double convex lens, E. The rays of light from the lamp which fall on the concave mirror, B, are reflected towards the nearly hemispherical lens, C, by which they are condensed, and pass on to the glass slide, on which the objects are painted in transparent colours, at D.

The image of the object at D is magnified in passing through the lens at E, and is ultimately received on a white screen placed at some distance in front. The lens E is fixed in a sliding tube to allow it to be adjusted to the distance of the screen from the lantern, so as to produce a clear image of the object.

The instrument is made more perfect if two lenses

Fig. 2.

are employed, as shown in fig. 2, instead of a single lens, E. In these arrangements the following are considered the best relative forms of the lenses and mirror.

* See *Saturday Magazine* Vol. XI., p. 72.

The concave mirror may be of any concavity required, but the flame of the lamp must be placed as nearly as possible in the *principal focal distance* of the mirror, which may be found in the following manner. Suppose A B, fig. 3, to be a section of a concave mirror, the curve of which could be described by placing one foot of a pair of compasses in the point C; if a line is drawn from C to the centre of the mirror at E, the point D, midway between C and E, will be the principal focal distance, and the rays of light received from the lamp by the mirror, will be reflected in parallel lines so as to fall with equal intensity upon the lens C (see fig. 1.) This lens must be of such a power that its focus shall be at or near the surface of the glass on which the picture is painted; the focus of a double convex lens in which the curves on both sides are alike, is equal to the diameter of a circle, of which its curve forms a portion. Thus, suppose B, fig. 4, to represent a lens, whose curved surface would form part of the circle, C D; by the rule given, the distance of its focus from the centre of the lens would be equal to A B.

Fig. 3.

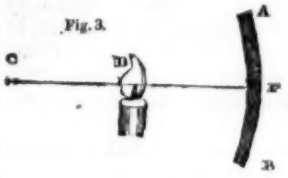
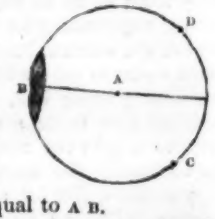


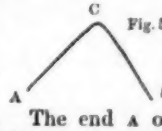
Fig. 4.



The Phantasmagoria produces its effects by the same optical arrangement as the Magic Lantern, but the pictures differ in having their back ground painted black, and instead of their being exhibited on a white opaque screen, they are seen through a transparent screen of calico oiled or wetted. The lantern is mounted on wheels, so as to be steadily rolled to a greater or a shorter distance from the transparent screen behind which it is placed, by this means increasing or diminishing the size of the projected image. In some cases, instead of being rolled along a platform or table, it is strapped round the body of the operator, who advances or recedes from the screen.

Another contrivance is attached to the lantern of the Phantasmagoria, which is not found in the Magic Lantern. The front lens of the instrument, instead of being fixed in a sliding tube, is placed at the end of a leather case containing a spring, whose action keeps it pressed outwards, acting like an old fashioned powder-puff. Two levers, A C and B C, fig. 5, are employed in the following manner, to regulate the action of this spring, and consequently bring the glass at its extremity nearer to, or allow it to recede further from, the slide on which the figures are painted. The end A of the lever A C, is fixed to the framework of the lantern nearest the exhibiter, where it works on a centre; at C it is attached to the lever C B, and the end B of this lever is fixed to the extremity of the leather tube, in the same manner as A is to the lantern, consequently, by bringing A and B nearer to each other, the glass is drawn back, and the spring of the tube itself will act in the contrary direction when left at liberty to do so. The object of this contrivance is to keep the lens at a proper focal distance from the screen.

Fig. 5.



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